



CHEMISTRY NMDCAT

(UNIT-14)

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03418729745(WhatsApp Groups)

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TOPICS

- Q.1** Formalin is the solution of formaldehyde in water
 a. 10% b. 20%
 c. 60% d. 40%
- Q.2** Ethyne when treated with water in the presence of H_2SO_4 produces
 a. Ethanal b. Methanal
 c. Propanal d. Propanone
- Q.3** The color of iodoform is
 a. White b. Yellow
 c. Blue d. Black
- Q.4** When aliphatic aldehyde is treated with Fehling's solution, a brick-red precipitate of _____ is formed
 a. Copper (I) oxide b. Copper (II) oxide
 c. Copper (II) hydroxide d. Copper (I) hydroxide
- Q.5** Phenyl hydrazone is formed on treatment of carbonyl compound with
 a. Phenyl Hydrazine b. Hydroxyl amine
 c. oximes d. Urea
- Q.6** Which of the following reagent reacts with both aldehydes and ketones
 a. Tollen's reagent b. Fehling' solution
 c. Benedict' solution d. Grignard reagent
- Q.7** _____ acts as nucleophile in aldol condensation, which attacks the electrophilic carbonyl carbon atom of the unchanged second molecule
 a. Hydroxide ion b. Alkoxide ion
 c. Carbanion d. Crotonaldehyde
- Q.8** Aldehydes and ketones are functional group isomers with general formula
 a. $\text{C}_n\text{H}_{2n}\text{O}$ b. $\text{C}_n\text{H}_n\text{O}$
 c. $\text{C}_n\text{H}_{3n}\text{O}$ d. $\text{C}_{2n}\text{H}_{2n}\text{O}$
- Q.9** Which of the following compounds belong to homologous series of aldehydes
 a. $\begin{array}{c} \text{O} \\ \parallel \\ \text{H}-\text{C}-\text{Cl} \end{array}$ b. $\begin{array}{c} \text{O} \\ \parallel \\ \text{H}-\text{C}-\text{NH}_2 \end{array}$
 c. $\begin{array}{c} \text{O} \\ \parallel \\ \text{H}-\text{C}-\text{H} \end{array}$ d. $\begin{array}{c} \text{O} \\ \parallel \\ \text{H}-\text{C}-\text{OC}_2\text{H}_5 \end{array}$
- Q.10** Both aldehydes and ketones are planer to the neighborhoods of carbonyl ($\text{C}=\text{O}$) group. Which one of the following bonds is distorted towards the oxygen atoms?
 a. π bond of C and O b. Sigma bond of C and O
 c. Sigma bond of C and H d. Sigma bond of C and C
- Q.11** The carbon atom of a carbonyl group is
 a. sp hybridized b. sp^2 hybridized
 c. sp^3 hybridized d. dsp^2 hybridized
- Q.12** $^5\text{CH}_3 - ^4\text{CH}_2 - ^3\text{CH}_2 - ^2\text{CH}_2 - ^1\text{CHO}$, which one is α -carbon in given structure
 a. 1 b. 3



c. 2

d. 4

Q.13 In carbonyl group the carbon atom has

- a. Partial negative charge and is electrophilic
- c. Partial negative charge and is nucleophilic
- b. Partial positive charge and is nucleophilic
- d. Partial positive charge and is electrophilic



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- Q.14** Isobutyl alcohol on oxidation gives compound, which contains functional group of
 a. Ether
 b. Carboxylic acid
 c. Aldehyde
 d. Ketone
- Q.15** What the product will be, when secondary alcohols are oxidized in the presence of acidified $\text{Na}_2\text{Cr}_2\text{O}_7$
 a. Alkenes
 b. Alkyl halides
 c. Alkynes
 d. Ketones
- Q.16** Why is it necessary to distill aldehyde formed from oxidation of primary alcohol through acidified potassium dichromate (VI) solution or acidified sodium dichromate (VI) solution?
 a. Aldehyde formed is unstable and decompose back to original precursor i.e. primary alcohol
 b. Aldehyde formed may react with primary alcohol, the original reactant
 c. Aldehyde may be oxidized further to a ketone
 d. Aldehyde formed may be oxidized further to carboxylic acid
- Q.17** What are X and Y in the given reaction

$$\text{CH}_3 - \text{CO} - \text{CH}_2 - \text{CH}_3 + 3[\text{O}] \xrightarrow{\text{K}_2\text{Cr}_2\text{O}_7/\text{H}_2\text{SO}_4} \text{X} + \text{Y}$$

 a. X = Acetic acid, Y = Propionic acid
 b. X = Acetic acid, Y = Formic acid
 c. X = Formic acid, Y = Acetic acid
 d. X = Acetic acid, Y = Acetic acid
- Q.18** Acetaldehyde is prepared in the laboratory by the oxidation of
 a. Methanol
 b. 2-Propanol
 c. 1-Propanol
 d. Ethanol
- Q.19** Formaldehyde is manufactured in the laboratory by passing a mixture of methanol vapours and air over _____
 a. FeO , Mo_2O_3
 b. Al_2O_3 , SiO_2
 c. Pt-asbestos
 d. Fe, MgO
- Q.20** Ketones can be prepared by
 a. Oxidation of secondary alcohol
 b. Hydration of alkynes
 c. Dry distillation of calcium acetate
 d. All of these
- Q.21** Which of the following is most reactive
 a. $\text{C}_6\text{H}_5\text{CHO}$
 b. HCHO
 c. CH_3CHO
 d. $\text{CH}_3\text{CH}_2\text{CHO}$
- Q.22** Which of the following cannot be produced by treatment of aldehyde or ketone with NaBH_4
 a. 1-Propanol
 b. 2-Methyl-2-propanol
 c. 2-Propanol
 d. Ethanol
- Q.23** Which of the following does not react with 2,4-dinitrophenyl hydrazine
 a. Ethanol
 b. Acetone
 c. Ethanal
 d. Methanal
- Q.24** Tollen's reagent does not react with
 a. $(\text{CH}_3)_2\text{CO}$
 b. CH_3CHO
 c. HCHO
 d.
- Q.25** Propanone does not undergo
 a. Reduction of Fehling's solution
 b. Cyanohydrin formation
 c. Hydrazone formation
 d. Formation of complex with sodium nitropruside
- Q.26** $\text{CH}_3 - \text{CH} = \text{CH} - \text{CHO} \longrightarrow \text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_2\text{OH}$
 Which of the following reagent is used for above reaction
 a. H_2/Ni
 b. $\text{K}_2\text{Cr}_2\text{O}_7/\text{H}_2\text{SO}_4$
 c. $\text{NaBH}_4/\text{H}_3\text{O}^+$
 d. I_2/NaOH
- Q.27** Cannizzaro's reaction is given by
 a. Formaldehyde
 b. Benzaldehyde
 c. Trimethylacetaldehyde
 d. All of these

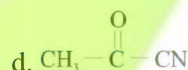
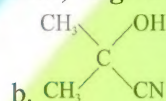
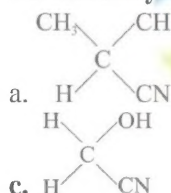


- Q.28** Aldehydes combine with alcohols in the presence of hydrogen chloride gas to form
 a. Ester
 b. Acetal
 c. Carboxylic acid
 d. Acid halide
- Q.29** Which of the following compounds give positive iodoform test as well as Tollen's test
 a. Methanal
 b. Propanal
 c. Ethanal
 d. Propanone

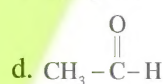
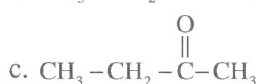
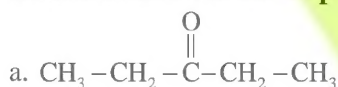
- Q.30** $\text{HCHO} + \text{HCN} \longrightarrow \text{H}_2\text{C}(\text{OH})\text{CN}$ in the above reaction nucleophile is
 a. CN^-
 b. HCl
 c. Cl^-
 d. OH^-

- Q.31** Consider the following reaction:
 $\text{R-CHO} + 2[\text{Ag}(\text{NH}_3)_2]\text{OH} \longrightarrow \text{RCOONH}_4 + 2\text{Ag} + 2\text{NH}_3 + \text{H}_2\text{O}$
 this reaction represents which of the following tests
 a. Fehling test
 b. Benedict test
 c. Ninhydrin test
 d. Tollen's test

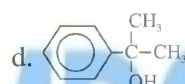
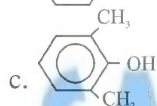
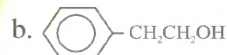
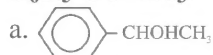
- Q.32** Formaldehyde reacts with HCN ($\text{NaCN} + \text{HCl}$) to give a compound



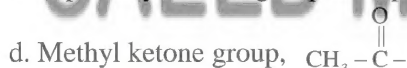
- Q.33** Iodoform test will not be positive with



- Q.34** What is the structure of alcohol which on oxidation with acidified $\text{Na}_2\text{Cr}_2\text{O}_7$ gives $\text{C}_6\text{H}_5\text{-CO-CH}_3$.



- Q.35** Which group gives a yellow precipitate of triiodomethane when warmed with alkaline aqueous iodine?



- Q.36** $\text{R-CH=N-NH-C}_6\text{H}_3(\text{NO}_2)_2$ It is a general formula of:

- a. 2,4 dinitrophenyl hydrazine
 c. 1,3 dinitrophenyl hydrazine

- b. Phenyl hydrazone
 d. 2,4 dinitrophenyl hydrazine

- Q.37** Which one of the following test is given by both aldehyde and ketone?

- a. Silver mirror test
 c. Fehling's solution test

- b. 2,4 DNPH test
 d. Benedict's solution test



- Q.38** The reaction of aldehydes and ketones with ammonia derivative $G-NH_2$ to form compounds containing the group $C=N-G$ and water is known as _____ reaction.
- a. Nucleophilic addition
b. Electrophilic addition
c. Nucleophilic substitution
d. Addition Elimination
- Q.39** Which one of the following compounds will give iodoform test on treatment with aqueous iodine?
- a. 3-pentanone
b. Propanal
c. Propanone
d. Butanal
- Q.40** Which one of the following reagents is used to distinguish between aldehydes and ketones?
- a. Tollen's reagent
b. Bromine
c. 2,4-DNPH
d. Alkaline iodine
- Q.41** The cyanohydrin of which carbonyl compound gives lactic acid on acidic hydrolysis
- a. Methanal
b. Propanol
c. Propanone
d. Ethanal
- Q.42** Aldehydes and small methyl ketones react with a saturated aqueous solution of sodium bisulphite to form a crystalline
- a. Yellow precipitate
b. Brick red precipitate
c. Wine red precipitate
d. White precipitate
- Q.43** The tendency of aldehydes to undergo _____ reaction makes them polymerize readily
- a. Electrophilic addition
b. Condensation reaction
c. Nucleophilic substitution
d. Elimination reaction
- Q.44** Aldehydes and Ketones are carbonyl compounds which of the following reacts with both $NaBH_4$ and Tollen's reagent
- a. Ketones only
b. Aldehydes only
c. Both aldehydes and Ketones
d. Neither Aldehyde nor Ketone
- Q.45** Propa-1-ol and propa-2-ol can be differentiated by
- a. Tollen's test
b. Benedict's test
c. Iodoform test
d. Fehling's test
- Q.46** Aldol condensation is not successful with compounds having _____
- a. No α -hydrogen
b. α -methyl
c. α -hydrogen
d. None of these
- Q.47** If an unsubstituted alkenes undergoes ozonolysis then it produces
- a. Formaldehyde and acetone
b. Only acetone
c. Only formaldehyde
d. Only propanone
- Q.48** Sodium bisulphite adduct on heating with a dilute mineral acid generate the
- a. Alcohol or aldehyde
b. Carboxylic acid or ketone
c. Aldehyde or ketone
d. Cyanohydrin or lactic acid
- Q.49** Both formaldehyde and acetaldehyde polymerize in the presence of dil. H_2SO_4 to give _____ and _____ respectively
- a. Paraldehyde, metaformaldehyde
b. Methanoic acid, ethanoic acid
c. Metaformaldehyde, paraldehyde
d. Crotonaldehyde, Paraldehyde
- Q.50** Aldehyde and ketone react with hydroxylamine to form _____
- a. Hydrazone
b. Acetal
c. Oxonium ion
d. Oxime



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Chem T-14

Chemistry Unit # 14

01- D	11- B	21- B	31- D	41- D
02- A	12- C	22- B	32- C	42- D
03- B	13- D	23- A	33- A	43- B
04- A	14- C	24- A	34- A	44- B
05- A	15- D	25- A	35- D	45- C
06- D	16- D	26- C	36- D (hydra- zone)	46- A
07- C	17- D	27- D	37- B	47- C
08- A	18- D	28- B	38- D D	48- C
09- C	19- C	29- C	39- D C	49- C
10- A	20- D	30- A	40- A	50- D

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